DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
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MARINE CORPS ORDER 5233.2

From: Commandant of the Marine Corps
To: Distribution List

Subj: CAPACITY PLANNING AND MANAGEMENT (CPM) PROGRAM

Ref: (a) MCO P5231.1A
(b) MCO P5230.14
(c) Director, Command, Control, Communications and Computer (C4) Division Letter of Instruction, CCIE-2: tah over 5234/5 dtd 16 Dec 1983 (NOTAL)
(d) MCO 5271.1

Report Required: Capacity Management Plan (Report and Symbol MC-5233-11), par. 6d(4)

1. Purpose. To establish policies and objectives and assign responsibilities for the Capacity Planning and Management Program.

2. Background

a. Since 1980, the Marine Corps has experienced exponential growth in the demand for on-line data processing support and Automated Information Systems (AIS's) applicable to the provisions of reference (a) and supported by the Marine Corps Data Network (MCDN) under the provisions of reference (b). Functional managers have increased requests for development of new on-line information systems and enhancements to existing ones. As these support requirements continue to grow, increased computing capacity at the Marine Corps Central Design and Programming Activities (MCCDPA's) and Regional Automated Services Centers (RASC's), and enhancements to the MCDN, will be needed to meet the demand. Long procurement lead times necessitate predicting computing and data communications capacity shortfalls far in advance to allow sufficient time to acquire and install additional computer equipment and data transmission facilities before service levels deteriorate to unacceptable levels. In addition, computer performance measurement techniques and evaluation methodologies are needed to use existing computing and network resources as efficiently as possible.

b. The Capacity Planning and Management Program was first established by reference (c). This Order formally institutionalizes the program within the Marine Corps. The program is designed to gather usage data on an ongoing basis from the seven regional processing centers. The data is used to build an analytical model to predict when projected workloads

will exceed available computing capacity. The Marine Corps has installed software tools to acquire statistical data, build a performance data base, analyze data to predict computing capacity shortfalls, and fine tune the performance of the regional processing centers. Additional tools will be acquired to perform similar functions for forecasting and validating telecommunications requirements for the MCDN.

3. Definitions

a. Capacity Planning and Management. The process by which measurements of current resource utilization are combined with projections of future resource requirements to allow management decisions to be made as to what computer and data communications resources will be required in the future, and how best to allocate existing resources so that they are used in the most efficient and effective manner.

b. Utilization Statistics. Those measures that record the amount of computer and data communications resources used to provide data processing support. Examples are the busy percentage of the central processing unit, response time measurements (e.g., terminal to host/Front End Processor (FEP), host/FEP to host/FEP), average circuit utilization for local, remote and trunk circuits, percentage of network availability, and the number of input/output requests for a task.

c. Service Level Agreement. An agreement between a user and a provider of data processing services stating the expected volume of work to be processed and establishing timeliness goals for the production of the output. It establishes, in written form, the agreed upon level of support to be provided.

4. Objectives. The objectives of the Capacity Planning and Management Program are to:

a. Identify computing and data communication capacity requirements to meet current and projected workloads in sufficient time to justify and program requirements in the budget process and to acquire and install computing resources before service levels deteriorate.

b. Validate computing and data communication capacity requirements to support the development of specifications contained in solicitation documents for the acquisition of computer and data communications resources.

c. Establish the expected level of support service to be provided to users by a processing site.

d. Ensure that existing computer and data communications resources are used in the most efficient and effective manner.

e. Validate computer and data communications resource requirements of AIS's under development or undergoing significant enhancement in order to estimate life cycle costs.

5. Procedures. Directors of MCCDPA's and RASC's will perform capacity planning and management in accordance with the procedures contained in IRM Technical Publications promulgated by reference (d).

6. Responsibilities

a. Director, C4 Division (CMC (CC)). The Director, Command, Control, Communications, and Computer (C4) Division is responsible for implementing and managing the Capacity Planning and Management Program. The responsibilities are to:

(1) Establish CPM policies, procedures, and standards.

(2) Identify the necessary equipment and software tools used to capture, store, and analyze host and network utilization statistics.

(3) Ensure that actions are initiated to program funds and acquire computer and data communications resources based on projections from the CPM program.

(4) Ensure that AIS development and modification design alternatives are selected which minimize the amount of additional mainframe and telecommunications capacity required.

b. Director, Marine Corps Central Design and Programming Activity (MCCDPA) Quantico. The Director, MCCDPA, Quantico, is responsible for administering the Capacity Management and Planning Program. The Director, MCCDPA, Quantico, will coordinate program activities pertaining to the MCDN with the Director, MCCDPA, Kansas City. The Director, MCCDPA, Quantico is responsible for:

(1) Establishing a baseline analytical model for each MCCDPA, RASC, and MCDN, and provide technical assistance to operate and interpret the model results.

(2) Recommending technical standards, guidelines, and software tools to support the Capacity Planning and Management Program.

(3) Estimating the computer and data communications resources required for all Class I AIS's under development, or undergoing significant enhancement, as part of the AIS life cycle management review process as defined in reference (a). The estimate shall include the cost of the computer and data communications resources over the AIS life cycle.

(4) Projecting future computer and data communications resource requirements. These projections will:

(a) Provide the justification for programming funds in the budget process; and

(b) Form the basis for the development of technical specifications contained in solicitation documents for computer and data communications resources.

c. Director, Marine Corps Central Design and Programming Activity (MCCDPA) Kansas City. The MCCDPA, Kansas City, is the MCDN Master Node. The Director, MCCDPA, Kansas City, will coordinate Capacity Management and Planning Program activities affecting the MCDN with the Director, MCCDPA Quantico. The Director, MCCDPA, Kansas City is responsible for:

(1) Maintaining records on network configuration at each MCDN site, specifically to include the configuration of both trunk and remote connections to each MCDN node.

(2) Reviewing estimates, prepared by the MCCDPA Quantico, concerning allocation of MCDN resources in support of AIS data communications requirement statements prepared in conjunction with procedure established in reference (a).

d. Directors of the MCCDPA's and RASC's. The directors of the MCCDPA's and RASC's will:

(1) Establish service level agreements with users that consume more than 5 percent of computing capacity.

(2) Conduct semiannual reviews to determine whether agreed upon service levels are being met. Take corrective action as required.

(3) Submit utilization statistics in accordance with Technical Publication IRM-5233-04, promulgated by reference (d), to the Director, MCCDPA Quantico on an ongoing basis.

(4) Prepare an annual capacity management plan in accordance with the procedures contained in IRM Technical Publication IRM-5233-04, promulgated by reference (d), and submit the plan to the Director, MCCDPA, Quantico by 15 July each year. Report Symbol MC-5233-11 has been assigned to this reporting requirement.

7. Records Disposition. A signed copy of the Capacity Management Plan and supporting documentation either in paper and/or electronic record format will be retained by the Director, MCCDPA, Quantico, for a period of 7 years. The Baseline Analytical Model will be maintained by MCCDPA, Quantico on an ongoing basis. Utilization statistics and

other input data to the model may be destroyed after incorporation into the model in accordance with the MCCDPA instructions. Service Level Agreements and Semi-Annual Reviews of same will retained by the MCCDPA's and RASC's for 3 years.

8. Action. Addressees will ensure compliance with the provision of this Order and implement the Capacity Planning and Management Program in accordance with the Technical Publications issued under the authority of reference (d).

9. Reserve Applicability. This Order is applicable to the Marine Corps Reserve.

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Assistant Commandant of
the Marine Corps and
Chief of Staff

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